



Dave Heineman
Governor

State of Nebraska

DEPARTMENT OF AGRICULTURE
GREGORY A. IBACH
Director

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524

CERTIFICATION FOR STANDARDS OF MEASUREMENT

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

Date: 12/13/2010
Agency ID: 90
NE Cert No: 20100169
P.O. No:

Submitted By: Brian Heskin

Electronic Copy Page 1

Denomination	Serial Number	Weight Number	Tolerance	Accept/Reject
5 gal	05-40547-04	1	VL	A
5 gal	05-40547-05	1	VL	A
5 gal	05-40547-06	1	VL	A
2 lb	10-OPI-9	1	F	A
2 lb	10-OPI-9	2	F	A
2 lb	10-OPI-9	3	F	A
2 lb	10-OPI-9	4	F	A
2 lb	10-OPI-9	5	F	A
2 lb	10-OPI-9	6	F	A
2 lb	10-OPI-9	7	F	A
2 lb	10-OPI-9	8	F	A
2 lb	10-OPI-9	9	F	A
2 lb	10-OPI-9	10	F	A
2 lb	10-OPI-9	11	F	A
2 lb	10-OPI-9	12	F	A
2 lb	10-OPI-9	13	F	A
2 lb	10-OPI-9	14	F	A
1 lb	10-OPI-9	15	F	A
1 lb	10-OPI-9	16	F	A
8 oz	10-OPI-9	17	F	A
4 oz	10-OPI-9	18	F	A
2 oz	10-OPI-9	19	F	A
1 oz	10-OPI-9	20	F	A
0.5 oz	10-OPI-9	21	F	A
0.25 oz	10-OPI-9	22	F	A

Department of Agriculture, 301 Centennial Mall South
Web Site: www.agr.ne.gov

Administration
P.O. Box 94947
Lincoln, NE 68509-4947
(402) 471-2341
FAX: (402) 471-6876

Agriculture Laboratories
3703 South 14th Street
Lincoln, NE 68502-5399
(402) 471-2176
FAX: (402) 471-0091

Bureau of Animal Industry
P.O. Box 94987
Lincoln, NE 68509-4787
(402) 471-2351
FAX: (402) 471-6893

Bureau of Dairies & Foods
P.O. Box 95064
Lincoln, NE 68509-5064
(402) 471-2536
FAX: (402) 471-2759

Bureau of Plant Industry
P.O. Box 94956
Lincoln, NE 68509-4756
(402) 471-2394
FAX: (402) 471-6892

Weights and Measures
P.O. Box 94757
Lincoln, NE 68509-4757
(402) 471-4292
FAX: (402) 471-2759

Submitted By: Brian Heskin

Electronic Copy Page 2

<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance</u>	<u>Accept/Reject</u>
0.125 oz	10-OPI-9	23	F	A
0.0625 oz	10-OPI-9	24	F	A
0.0625 oz*	10-OPI-9	25	F	A
8 oz	11A9	17	F	A
4 oz	11A9	18	F	A
2 oz	11A9	19	F	A
1 oz	11A9	20	F	A
0.5 oz	11A9	21	F	A
0.25 oz	11A9	22	F	A
0.125 oz	11A9	23	F	A
0.0625 oz	11A9	24	F	A
0.0625 oz*	11A9	25	F	A
0.2 lb	17649	1	F	A
0.2 lb*	17649	2	F	A
0.1 lb	17649	3	F	A
0.05 lb	17649	4	F	A
0.02 lb	17649	5	F	A
0.02 lb*	17649	6	F	A
0.01 lb	17649	7	F	A
0.005 lb	17649	8	F	A
0.002 lb	17649	9	F	A
0.002 lb*	17649	10	F	A
0.001 lb	17649	11	F	A
5 gal	40702A	1	VL	A
5 gal	40702B	1	VL	A
25 lb	WM25-46	1	F	A
25 lb	WM25-47	1	F	A
25 lb	WM25-88	1	F	A
25 lb	WM25-89	1	F	A
25 lb	WM25-90	1	F	A
25 lb	WM25-91	1	F	A
25 lb	WM25-92	1	F	A
25 lb	WM25-93	1	F	A
25 lb	WM25-94	1	F	A
25 lb	WM25-95	1	F	A
0.3 lb	WM-3G95	1	F	A

Submitted By: Brian Heskin

Electronic Copy Page 3

<u>Denomination</u>	<u>Serial Number</u>	<u>Weight Number</u>	<u>Tolerance</u>	<u>Accept/Reject</u>
0.2 lb	WM-3G95	2	F	A
0.1 lb	WM-3G95	3	F	A
0.05 lb	WM-3G95	4	F	A
0.03 lb	WM-3G95	5	F	A
0.02 lb	WM-3G95	6	F	A
0.01 lb	WM-3G95	7	F	A
0.005 lb	WM-3G95	8	F	A
0.003 lb	WM-3G95	9	F	A
0.002 lb	WM-3G95	10	F	A
0.001 lb	WM-3G95	11	F	A
0.001 lb*	WM-3G95	12	F	A
10 lb	WM-6D98	1	F	A
5 lb	WM-6D98	2	F	A
2 lb	WM-6D98	3	F	A
2 lb*	WM-6D98	4	F	A
1 lb	WM-6D98	5	F	A
0.5 lb	WM-6D98	6	F	A
4 kg	WM-7	1	4	A
25 lb	WM-D10	1	F	A
25 lb	WM-D11	1	F	A
25 lb	WM-D12	1	F	A
25 lb	WM-D3	1	F	A
25 lb	WM-D4	1	F	A
25 lb	WM-D5	1	F	A
25 lb	WM-D6	1	F	A
25 lb	WM-D7	1	F	A
25 lb	WM-D8	1	F	A
25 lb	WM-D9	1	F	A
300 g	WM-G89-5	1	4	A
200 g	WM-G89-5	2	4	A
100 g	WM-G89-5	3	4	A
50 g	WM-G89-5	4	4	A
30 g	WM-G89-5	5	4	A
20 g	WM-G89-5	6	4	A
10 g	WM-G89-5	7	4	A
5 g	WM-G89-5	8	4	A
3 g	WM-G89-5	9	4	A
2 g	WM-G89-5	10	4	A
1 g	WM-G89-5	11	4	A
500 mg	WM-G89-5	12	4	A
200 mg	WM-G89-5	13	4	A
200 mg*	WM-G89-5	14	4	A

Submitted By: Brian Heskin

Electronic Copy Page 4

Denomination	Serial Number	Weight Number	Tolerance	Accept/Reject
100 mg	WM-G89-5	15	4	A
50 mg	WM-G89-5	16	4	A
20 mg	WM-G89-5	17	4	A
20 mg*	WM-G89-5	18	4	A
10 mg	WM-G89-5	19	4	A
5 mg	WM-G89-5	20	4	A
2 mg	WM-G89-5	21	4	A
2 mg*	WM-G89-5	22	4	A
1 mg	WM-G89-5	23	4	A

These field standards have been compared with our reference standards and found to be within the tolerances for their class, or condemned, as prescribed by the National Institute of Standards and Technology. These field standards also meet the required specifications.

The reference standards used are traceable to the National Institute of Standards and Technology (NIST). Our traceability is maintained through control charts, regional inter-comparisons and periodic recertifications. This certificate is issued by the Nebraska Department of Agriculture / Division of Weights and Measures. Reproduction of this certificate must include the entire document (including all attached papers).

See 'Test Results' attached

See report/letter attached



Craig E. Olsen
Nebraska State Metrologist

**Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087**

SOP 5 - 3-1 Weighing Design - Summary Of Test Results

Form No.: NE04LF4-R00

Agency ID: 90
Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:
Observer: CEO

Submitted By: Brian Heskin

Electronic Copy

Page 1 of 2

Denom.	Serial Number	Wt. No.	True Mass (g)	Conventional Mass (g)	Uncertainty (g)	Comparator used	Standard used
300 g	WM-G89-5	1	300.00185825	300.00093974	0.00015698	CC1201 / 1 kg	300g
200 g	WM-G89-5	2	200.00199206	200.00137971	0.00015663	CC1201 / 1 kg	200g
100 g	WM-G89-5	3	100.00043353	100.00012736	0.00006697	AT106_100G	100g
50 g	WM-G89-5	4	50.00079078	50.00063769	0.00006303	AT106_100G	50g
30 g	WM-G89-5	5	30.00014368	30.00005183	0.00006220	AT106_100G	30g
20 g	WM-G89-5	6	20.00062761	20.00056637	0.00006189	AT106_100G	20g
10 g	WM-G89-5	7	10.00023102	10.00020040	0.00001672	AT106_10G	10g
5 g	WM-G89-5	8	5.00028780	5.00027249	0.00000674	UMT5/6_5G	5g
3 g	WM-G89-5	9	3.00003721	3.00002802	0.00000640	UMT5/6_5G	3g
2 g	WM-G89-5	10	2.00024978	2.00024366	0.00000625	UMT5/6_5G	2g
1 g	WM-G89-5	11	0.99986515	0.99986209	0.00000626	UMT5/6_5G	1g
500 mg	WM-G89-5	12	0.50000186	0.50000033	0.00000489	UMT5/6_1G	500mg
200 mg	WM-G89-5	13	0.20000175	0.20000113	0.00000483	UMT5/6_1G	200mg
200 mg*	WM-G89-5	14	0.19998218	0.19998157	0.00000483	UMT5/6_1G	200mg
100 mg	WM-G89-5	15	0.09997285	0.09997254	0.00000380	UMT5/6_100MG	100mg
50 mg	WM-G89-5	16	0.04994364	0.04994349	0.00000380	UMT5/6_100MG	50mg
20 mg	WM-G89-5	17	0.02001750	0.02001161	0.00000379	UMT5/6_100MG	20mg
20 mg*	WM-G89-5	18	0.02002466	0.02001877	0.00000379	UMT5/6_100MG	20mg
10 mg	WM-G89-5	19	0.01001483	0.01001189	0.00000296	UMT5/6_10MG	10mg
5 mg	WM-G89-5	20	0.00502476	0.00502328	0.00000295	UMT5/6_10MG	5mg

Due to handling, storage and/or environmental factors, the reported values are valid only while test items are within our control. No calibration periods or intervals are given with this report. We can not guarantee accuracy of results beyond the controls of our laboratory.

All values are "as found" unless stated differently in an attachment to the certification.

The uncertainty of measurement is determined using the uncertainty of the reference standard(s), standard deviation of the process, environmental factors and bias using a RSS calculation. Uncertainty values are calculated using a K factor of 2.

Agency ID: 90
Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:
Observer: CEO

Submitted By: Brian Heskin

Electronic Copy

Page 2 of 2

Denom.	Serial Number	Wt. No.	True Mass (g)	Conventional Mass (g)	Uncertainty (g)	Comparator used	Standard used
2 mg	WM-G89-5	21	0.00201279	0.00201219	0.00000295	UMT5/6_10MG	2mg
2 mg*	WM-G89-5	22	0.00201704	0.00201644	0.00000295	UMT5/6_10MG	2mg
1 mg	WM-G89-5	23	0.00101992	0.00101962	0.00000296	UMT5/6_10MG	1mg*

Due to handling, storage and/or environmental factors, the reported values are valid only while test items are within our control. No calibration periods or intervals are given with this report. We can not guarantee accuracy of results beyond the controls of our laboratory.

All values are "as found" unless stated differently in an attachment to the certification.

The uncertainty of measurement is determined using the uncertainty of the reference standard(s), standard deviation of the process, environmental factors and bias using a RSS calculation. Uncertainty values are calculated using a K factor of 2.

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 8 - Modified Substitution Test Results

Form No.: NE04LF9-R00

Agency ID: 90
 Agency: Dept of Ag. - Weights & Measures
 1118 Eldorado Drive
 Omaha, NE 68154-1135

NE Cert No: 20100169
 Date: 12/13/2010
 P.O. No:
 Observer: CEO

Submitted By: Brian Heskin

Electronic Copy

Page 1 of 4

Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
10-OPI-9	1	0	2 lb	CC1201-lb	NSL-2-1	-0.0295181 g	0.091 g	0.0007758 g	A
10-OPI-9	2	0	2 lb	CC1201-lb	NSL-2-1	-0.0214181 g	0.091 g	0.0007758 g	A
10-OPI-9	3	0	2 lb	CC1201-lb	NSL-2-1	-0.0142181 g	0.091 g	0.0007758 g	A
10-OPI-9	4	0	2 lb	CC1201-lb	NSL-2-1	-0.0153181 g	0.091 g	0.0007758 g	A
10-OPI-9	5	0	2 lb	CC1201-lb	NSL-2-1	0.0027819 g	0.091 g	0.0007758 g	A
10-OPI-9	6	0	2 lb	CC1201-lb	NSL-2-1	-0.0041181 g	0.091 g	0.0007758 g	A
10-OPI-9	7	0	2 lb	CC1201-lb	NSL-2-1	0.0153819 g	0.091 g	0.0007758 g	A
10-OPI-9	8	0	2 lb	CC1201-lb	NSL-2-1	0.0128819 g	0.091 g	0.0007758 g	A
10-OPI-9	9	0	2 lb	CC1201-lb	NSL-2-1	-0.0585181 g	0.091 g	0.0007758 g	A
10-OPI-9	10	0	2 lb	CC1201-lb	NSL-2-1	0.0200819 g	0.091 g	0.0007758 g	A
10-OPI-9	11	0	2 lb	CC1201-lb	NSL-2-1	0.0314819 g	0.091 g	0.0007758 g	A
10-OPI-9	12	0	2 lb	CC1201-lb	NSL-2-1	-0.0268181 g	0.091 g	0.0007758 g	A
10-OPI-9	13	0	2 lb	CC1201-lb	NSL-2-1	0.0237819 g	0.091 g	0.0007758 g	A
10-OPI-9	14	0	2 lb	CC1201-lb	NSL-2-1	-0.0014181 g	0.091 g	0.0007758 g	A
10-OPI-9	15	0	1 lb	CC1201-lb	NSL-1-1	-0.0113241 g	0.07 g	0.0007427 g	A
10-OPI-9	16	0	1 lb	CC1201-lb	NSL-1-1	-0.0171241 g	0.07 g	0.0007427 g	A
10-OPI-9	17	0	8 oz	CC1201-lb	NSL-8-1	-0.0203265 g	0.045 g	0.0007356 g	A
10-OPI-9	18	0	4 oz	CC1201-lb	NSL-Z	0.0082960 g	0.023 g	0.0007272 g	A
10-OPI-9	19	0	2 oz	AT106-lb	NSL-Y	0.0045282 g	0.011 g	0.0000616 g	A
10-OPI-9	20	0	1 oz	AT106-lb	2A9-1oz	-0.0040211 g	0.0054 g	0.0003667 g	A
10-OPI-9	21	0	0.5 oz	AT106-lb	2A9-1.2oz	0.0014009 g	0.0028 g	0.0003666 g	A
10-OPI-9	22	0	0.25 oz	AT106-lb	2A9-1.4oz	0.0006705 g	0.0017 g	0.0000532 g	A
10-OPI-9	23	0	0.125 oz	AT106-lb	2A9-1.8oz	-0.0002257 g	0.0013 g	0.0000510 g	A
10-OPI-9	24	0	0.0625 oz	AT106-lb	2A9-1.16oz	0.0008058 g	0.0011 g	0.0000510 g	A
10-OPI-9	25	0	0.0625 oz*	AT106-lb	2A9-1.16oz	-0.0004106 g	0.0011 g	0.0000510 g	A
11A9	17	0	8 oz	CC1201-lb	NSL-8-1	0.0101735 g	0.045 g	0.0007356 g	A

Retest number - 0 indicates "as received" error / 1 indicates "adjusted to" error

The uncertainty of measurement is determined using the uncertainty of the reference standard(s), standard deviation of the process, environmental factors and bias using a RSS calculation. Uncertainty values are calculated using a K factor of 2.

"As received" values for weights may not be a true "as found" value because these weights could have been cleaned and/or repainted prior to submission to this lab. Due to handling, storage and/or environmental factors; the reported values are valid only while test items are within our control. No calibration period or interval is given with this report. We can not guarantee accuracy of results beyond the controls of our laboratory.

Agency ID: 90
 Agency: Dept of Ag. - Weights & Measures
 1118 Eldorado Drive
 Omaha, NE 68154-1135

NE Cert No: 20100169
 Date: 12/13/2010
 P.O. No:
 Observer: CEO

Submitted By: Brian Heskin

Electronic Copy

Page 2 of 4

Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
11A9	18	0	4 oz	CC1201-lb	NSL-Z	0.0009960 g	0.023 g	0.0007272 g	A
11A9	19	0	2 oz	AT106-lb	NSL-Y	-0.0047748 g	0.011 g	0.0000616 g	A
11A9	20	0	1 oz	AT106-lb	2A9-1oz	0.0023579 g	0.0054 g	0.0003667 g	A
11A9	21	0	0.5 oz	AT106-lb	2A9-1.2oz	-0.0027051 g	0.0028 g	0.0003666 g	A
11A9	22	0	0.25 oz	AT106-lb	2A9-1.4oz	-0.0002345 g	0.0017 g	0.0000532 g	A
11A9	23	0	0.125 oz	UMT5/6-lb	2A9-1.8oz	-0.0005075 g	0.0013 g	0.0000127 g	A
11A9	24	0	0.0625 oz	UMT5/6-lb	2A9-1.16oz	0.0000193 g	0.0011 g	0.0000127 g	A
11A9	25	0	0.0625 oz*	UMT5/6-lb	2A9-1.16oz	-0.0005076 g	0.0011 g	0.0000127 g	A
17649	1	0	0.2 lb	AT106-lb	NSL-WK2	0.0086049 g	0.018 g	0.0000645 g	A
17649	2	0	0.2 lb*	AT106-lb	NSL-WK2	0.0089439 g	0.018 g	0.0000645 g	A
17649	3	0	0.1 lb	AT106-lb	NSL-WK3	0.0040837 g	0.0091 g	0.0000583 g	A
17649	4	0	0.05 lb	AT106-lb	NSL-WK4	0.0018181 g	0.0045 g	0.0000569 g	A
17649	5	0	0.02 lb	AT106-lb	NSL-WK6	0.0003874 g	0.0018 g	0.0000538 g	A
17649	6	0	0.02 lb*	AT106-lb	NSL-WK6	0.0007294 g	0.0018 g	0.0000538 g	A
17649	7	0	0.01 lb	UMT5/6-lb	NSL-WK7	0.0004605 g	0.0015 g	0.0000136 g	A
17649	8	0	0.005 lb	UMT5/6-lb	NSL-WK8	0.0003180 g	0.0012 g	0.0000127 g	A
17649	9	0	0.002 lb	UMT5/6-lb	NSL-WK10	0.0000987 g	0.00087 g	0.0000120 g	A
17649	10	0	0.002 lb*	UMT5/6-lb	NSL-WK10	-0.0000339 g	0.00087 g	0.0000120 g	A
17649	11	0	0.001 lb	UMT5/6-lb	NSL-WK11	0.0001778 g	0.0007 g	0.0000119 g	A
WM25-46	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.5468098 g	1.1 g	0.0329709 g	R
WM25-46	1	1	25 lb	KA30-3_25lb	NSL-25-1	-0.0881902 g	1.1 g	0.0329709 g	A
WM25-47	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.4918098 g	1.1 g	0.0329709 g	R
WM25-47	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.6018098 g	1.1 g	0.0329709 g	A
WM25-88	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.5768098 g	1.1 g	0.0329709 g	R
WM25-88	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.1668098 g	1.1 g	0.0329709 g	A
WM25-89	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.0468098 g	1.1 g	0.0329709 g	R
WM25-89	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.5668098 g	1.1 g	0.0329709 g	A
WM25-90	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.9868098 g	1.1 g	0.0329709 g	R
WM25-90	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.0368098 g	1.1 g	0.0329709 g	A
WM25-91	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.9618098 g	1.1 g	0.0329709 g	R
WM25-91	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.0118098 g	1.1 g	0.0329709 g	A
WM25-92	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.2018098 g	1.1 g	0.0329709 g	R
WM25-92	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.6268098 g	1.1 g	0.0329709 g	A

Retest number - 0 indicates "as received" error / 1 indicates "adjusted to" error

The uncertainty of measurement is determined using the uncertainty of the reference standard(s), standard deviation of the process, environmental factors and bias using a RSS calculation. Uncertainty values are calculated using a K factor of 2.

"As received" values for weights may not be a true "as found" value because these weights could have been cleaned and/or repainted prior to submission to this lab. Due to handling, storage and/or environmental factors; the reported values are valid only while test items are within our control. No calibration period or interval is given with this report. We can not guarantee accuracy of results beyond the controls of our laboratory.

Agency ID: 90
 Agency: Dept of Ag. - Weights & Measures
 1118 Eldorado Drive
 Omaha, NE 68154-1135

NE Cert No: 20100169
 Date: 12/13/2010
 P.O. No:
 Observer: CEO

Submitted By: Brian Heskin

Electronic Copy

Page 3 of 4

Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
WM25-93	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.4118098 g	1.1 g	0.0329709 g	R
WM25-93	1	1	25 lb	KA30-3_25lb	NSL-25-1	-0.1331902 g	1.1 g	0.0329709 g	A
WM25-94	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.6318098 g	1.1 g	0.0329709 g	R
WM25-94	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.2218098 g	1.1 g	0.0329709 g	A
WM25-95	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.8418098 g	1.1 g	0.0329709 g	R
WM25-95	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.3818098 g	1.1 g	0.0329709 g	A
WM-3G95	1	0	0.3 lb	CC1201-lb	NSL-WK1	0.0013900 g	0.027 g	0.0007302 g	A
WM-3G95	2	0	0.2 lb	AT106-lb	NSL-WK2	0.0043419 g	0.018 g	0.0000645 g	A
WM-3G95	3	0	0.1 lb	AT106-lb	NSL-WK3	0.0031677 g	0.0091 g	0.0000583 g	A
WM-3G95	4	0	0.05 lb	AT106-lb	NSL-WK4	0.0013881 g	0.0045 g	0.0000569 g	A
WM-3G95	5	0	0.03 lb	AT106-lb	NSL-WK5	0.0006633 g	0.0027 g	0.0000525 g	A
WM-3G95	6	0	0.02 lb	AT106-lb	NSL-WK6	0.0005714 g	0.0018 g	0.0000538 g	A
WM-3G95	7	0	0.01 lb	UMT5/6-lb	NSL-WK7	0.0003710 g	0.0015 g	0.0000136 g	A
WM-3G95	8	0	0.005 lb	UMT5/6-lb	NSL-WK8	0.0008101 g	0.0012 g	0.0000127 g	A
WM-3G95	9	0	0.003 lb	UMT5/6-lb	NSL-WK9	0.0006243 g	0.00099 g	0.0000124 g	A
WM-3G95	10	0	0.002 lb	UMT5/6-lb	NSL-WK10	0.0006808 g	0.00087 g	0.0000120 g	A
WM-3G95	11	0	0.001 lb	UMT5/6-lb	NSL-WK11	0.0002127 g	0.0007 g	0.0000119 g	A
WM-3G95	12	0	0.001 lb*	UMT5/6-lb	NSL-WK11	0.0002084 g	0.0007 g	0.0000119 g	A
WM-6D98	1	0	10 lb	CC10000S-10 lb	NEBR-STD-10	0.2206326 g	0.45 g	0.0022389 g	A
WM-6D98	2	0	5 lb	CC10000S-5 lb	NSL-5-1	0.0993703 g	0.23 g	0.0016699 g	A
WM-6D98	3	0	2 lb	CC1201-lb	NSL-2-1	0.0461819 g	0.091 g	0.0007758 g	A
WM-6D98	4	0	2 lb*	CC1201-lb	NSL-2-1	0.0379819 g	0.091 g	0.0007758 g	A
WM-6D98	5	0	1 lb	CC1201-lb	NSL-1-1	0.0242759 g	0.07 g	0.0007427 g	A
WM-6D98	6	0	0.5 lb	CC1201-lb	NSL-8-1	0.0192735 g	0.045 g	0.0007356 g	A
WM-7	1	0	4 kg	CC10000S-5 kg	4kg	-0.0022918 g	0.08 g	0.0012590 g	A
WM-D10	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.5368098 g	1.1 g	0.0329709 g	R
WM-D10	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.0068098 g	1.1 g	0.0329709 g	A
WM-D11	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.7268098 g	1.1 g	0.0329709 g	R
WM-D11	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.5168098 g	1.1 g	0.0329709 g	A
WM-D12	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.0018098 g	1.1 g	0.0329709 g	R
WM-D12	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.2768098 g	1.1 g	0.0329709 g	A
WM-D3	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.5918098 g	1.1 g	0.0329709 g	R
WM-D3	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.2118098 g	1.1 g	0.0329709 g	A

Retest number - 0 indicates "as received" error / 1 indicates "adjusted to" error

The uncertainty of measurement is determined using the uncertainty of the reference standard(s), standard deviation of the process, environmental factors and bias using a RSS calculation. Uncertainty values are calculated using a K factor of 2.

"As received" values for weights may not be a true "as found" value because these weights could have been cleaned and/or repainted prior to submission to this lab. Due to handling, storage and/or environmental factors; the reported values are valid only while test items are within our control. No calibration period or interval is given with this report. We can not guarantee accuracy of results beyond the controls of our laboratory.

Agency ID: 90
 Agency: Dept of Ag. - Weights & Measures
 1118 Eldorado Drive
 Omaha, NE 68154-1135

NE Cert No: 20100169
 Date: 12/13/2010
 P.O. No:
 Observer: CEO

Submitted By: Brian Heskin

Electronic Copy

Page 4 of 4

Serial Number	Wt. No.	Retest No.	Denom.	Comparator used	Standard Used	Error of test weight	Tolerance	Uncertainty	Accepted or Rejected
WM-D4	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.1968098 g	1.1 g	0.0329709 g	R
WM-D4	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.4668098 g	1.1 g	0.0329709 g	A
WM-D5	1	0	25 lb	KA30-3_25lb	NSL-25-1	0.9818098 g	1.1 g	0.0329709 g	A
WM-D6	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.7668098 g	1.1 g	0.0329709 g	R
WM-D6	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.1068098 g	1.1 g	0.0329709 g	A
WM-D7	1	0	25 lb	KA30-3_25lb	NSL-25-1	1.6968098 g	1.1 g	0.0329709 g	R
WM-D7	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.4418098 g	1.1 g	0.0329709 g	A
WM-D8	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.0618098 g	1.1 g	0.0329709 g	R
WM-D8	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.0468098 g	1.1 g	0.0329709 g	A
WM-D9	1	0	25 lb	KA30-3_25lb	NSL-25-1	2.2618098 g	1.1 g	0.0329709 g	R
WM-D9	1	1	25 lb	KA30-3_25lb	NSL-25-1	0.0368098 g	1.1 g	0.0329709 g	A

Retest number - 0 indicates "as received" error / 1 indicates "adjusted to" error

The uncertainty of measurement is determined using the uncertainty of the reference standard(s), standard deviation of the process, environmental factors and bias using a RSS calculation. Uncertainty values are calculated using a K factor of 2.

"As received" values for weights may not be a true "as found" value because these weights could have been cleaned and/or repainted prior to submission to this lab. Due to handling, storage and/or environmental factors; the reported values are valid only while test items are within our control. No calibration period or interval is given with this report. We can not guarantee accuracy of results beyond the controls of our laboratory.

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:

Submitted By: Brian Heskin

Page 1 of 13

Serial #: 05-40547-04
Retest #: 0
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: SS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	54.4 °F	0.999445	0 in3

Test Measure Information

Water Temperature: 54.4 °F
Water Density: 0.999445 g/cm³
Scale Reading: -0.5 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0013 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:

Submitted By: Brian Heskin

Page 2 of 13

Serial #: 05-40547-04
Retest #: 1
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: SS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	54.4 °F	0.999445	0 in3

Test Measure Information

Water Temperature: 54.4 °F
Water Density: 0.999445 g/cm³
Scale Reading: -0.25 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:

Submitted By: Brian Heskin

Page 3 of 13

Serial #: 05-40547-04
Retest #: 2
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: SS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	53.2 °F	0.999522	0 in3

Test Measure Information

Water Temperature: 53.2 °F
Water Density: 0.999522 g/cm³
Scale Reading: -0.25 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:

Submitted By: Brian Heskin

Page 4 of 13

Serial #: 05-40547-05
Retest #: 0
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: SS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	53.3 °F	0.999515	0 in3

Test Measure Information

Water Temperature: 53.3 °F
Water Density: 0.999515 g/cm³
Scale Reading: -0.5 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0013 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:

Submitted By: Brian Heskin

Page 5 of 13

Serial #: 05-40547-05
Retest #: 1
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: SS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	53.3 °F	0.999515	0 in3

Test Measure Information

Water Temperature: 53.3 °F
Water Density: 0.999515 g/cm³
Scale Reading: -0.25 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:

Submitted By: Brian Heskin

Page 6 of 13

Serial #: 05-40547-05
Retest #: 2
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: SS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	52.7 °F	0.999552	0 in3

Test Measure Information

Water Temperature: 52.7 °F
Water Density: 0.999552 g/cm³
Scale Reading: -0.25 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:

Submitted By: Brian Heskin

Page 7 of 13

Serial #: 05-40547-06
Retest #: 0
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: SS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	52.7 °F	0.999552	0 in3

Test Measure Information

Water Temperature: 52.7 °F
Water Density: 0.999552 g/cm³
Scale Reading: -0.25 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

Form No.: NE03LF12-R00

NE Cert No: 20100169

Date: 12/13/2010

P.O. No:

Submitted By: Brian Heskin

Page 8 of 13

Serial #: 05-40547-06
Retest #: 1
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: SS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	SS	0.0000265 /°F	51.8 °F	0.999604	0 in3

Test Measure Information

Water Temperature: 51.8 °F
Water Density: 0.999604 g/cm³
Scale Reading: -0.25 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:

Submitted By: Brian Heskin

Page 9 of 13

Serial #: 40702A
Retest #: 0
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: MS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	MS	0.0000265 /°F	52.4 °F	0.999570	0 in3

Test Measure Information

Water Temperature: 52.4 °F
Water Density: 0.999570 g/cm³
Scale Reading: -0.5 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0013 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:

Submitted By: Brian Heskin

Page 10 of 13

Serial #: 40702A
Retest #: 1
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: MS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	MS	0.0000265 /°F	52.4 °F	0.999570	0 in3

Test Measure Information

Water Temperature: 52.4 °F
Water Density: 0.999570 g/cm³
Scale Reading: -0.25 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

Form No.: NE03LF12-R00

NE Cert No: 20100169

Date: 12/13/2010

P.O. No:

Submitted By: Brian Heskin

Page 11 of 13

Serial #: 40702A
Retest #: 2
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material: MS
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991	MS	0.0000265 /°F	52.2 °F	0.999582	0 in3

Test Measure Information

Water Temperature: 52.2 °F
Water Density: 0.999582 g/cm³
Scale Reading: -0.1 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 4.9995 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

Form No.: NE03LF12-R00

NE Cert No: 20100169

Date: 12/13/2010

P.O. No:

Submitted By: Brian Heskin

Page 12 of 13

Serial #: 40702B
Retest #: 0
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material:
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991		0.0000265 /°F	51.8 °F	0.999604	0 in3

Test Measure Information

Water Temperature: 51.8 °F
Water Density: 0.999604 g/cm³
Scale Reading: -0.25 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A

Nebraska Standards Laboratory
3721 West Cuming Street
Lincoln, NE 68524
(402) 471-2087

SOP 19 - Volume Transfer Test Results

Agency ID: 90

Form No.: NE03LF12-R00

Agency: Dept of Ag. - Weights & Measures
1118 Eldorado Drive
Omaha, NE 68154-1135

NE Cert No: 20100169
Date: 12/13/2010
P.O. No:

Submitted By: Brian Heskin

Page 13 of 13

Serial #: 40702B
Retest #: 1
Denomination: 5 gal
Observer: CEO

Eq Vol/cu.in.: 1155 cu.in.
Tolerance Class: VL
Material:
Coef of Expansion: 0.0000265 °F

Test Data

Del#	Std ID	Delivery	Material	Coef of Exp	Water Temp	Water Density	Delta
1	5gal	4.9991		0.0000265 /°F	52.1 °F	0.999587	0 in3

Test Measure Information

Water Temperature: 52.1 °F
Water Density: 0.999587 g/cm³
Scale Reading: -0.25 cu.in.

Test Results

Test Measure Volume @ 60° F at zero scale reading: 5.0002 gal.
Tolerance: 0.0025 gal.
Uncertainty: 0.0012 gal.
Accepted/Rejected: A